

Appl. No. 10/825,086
Amtd. Dated July 8, 2008
Reply to Office Action of April 11, 2008

Attorney Docket No. 81716.0123
Customer No.: 26021

REMARKS/ARGUMENTS:

Claims 1-24 and 30-39 are canceled without prejudice. Claim 25 is amended. New claims 40 and 41 are added. Support for the amendment to claim 25 and new claims 40 and 41 can be found in Figure 14B and at p. 109, lines 3-20 of Applicant's specification. Claims 25-29, 40, and 41 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

The present invention relates to a microchemical chip in which a predetermined treatment such as a reaction or analysis can be performed with respect to a fluid to be treated such as a substance or a reagent that flows through a small channel, and a method for producing the same. More specifically, the present invention relates to a microchemical chip in which it is possible to mix a plurality of different fluids to be treated and then perform a predetermined treatment, for example, as in the case where blood and a reagent are mixed to cause a reaction, and a method for producing the same. (Applicant's specification, at p. 1, lines 4-14).

CLAIM REJECTIONS UNDER 35 U.S.C. § 102:

Claims 25, 27, and 29 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yasuda et al. (U.S. Patent No. 6,244,738). Applicant respectfully traverses this rejection as to amended claim 25. Claims 25, as amended, is as follows:

A microchemical chip comprising a substrate provided with a channel through which a fluid to be treated flows and a plurality of supply portions connected to the channel and from which a plurality of fluids to be treated are poured into the channel, respectively, wherein the plurality of fluids to be treated are poured from the plurality of

supply portions into the channel, respectively, and the plurality of fluids poured are merged and subjected to a predetermined treatment,

wherein a vibrating element is provided on a surface of the channel in a vicinity of a position in which the channel is connected to the supply portion.

Applicant respectfully submits that Yasuda cannot anticipate or render claim 25 obvious, because Yasuda fails to teach or suggest "a vibrating element is provided on a surface of the channel in a vicinity of a position in which the channel is connected to the supply portion."

It is an aspect of the present invention that a vibrating element is provided in the vicinity of the position in which the channel is connected to the supply portions, so that vibration from the vibrating element is transmitted to the merged fluids, and thus a turbulent flow is generated in the merged fluids. By generating a turbulent flow in the merged fluids, a plurality of fluids can be mixed. (Applicant's specification, at p. 28, lines 1-7).

In a configuration where the vibrating element is provided on the wall of the channel or in the channel, it is possible to agitate fluids more efficiently than in a configuration where the vibrating element is provided on an outer surface of the chip, in which the vibration of the element is only indirectly transmitted to the fluid by way of the chip.

Yasuda is directed to a technique for mixing and stirring a fluid in a channel by radiation of ultrasound. (Yasuda, column 1, lines 6-7). Yasuda fails to teach or suggest that the vibrating element is provided on the wall of the channel or in the channel.

In light of the foregoing, Applicant respectfully submits that Yasuda cannot anticipate or render claim 25 obvious, because Yasuda fails to teach or suggest each

and every claim limitation. Claims 27 and 29 depend from claim 25 and therefore, cannot be anticipated or rendered obvious for at least the same reasons as claim 25. Withdrawal of this rejection is thus respectfully requested.

Claims 25-29 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Cosby et al. (U.S. Patent Application Publication No. 2003/0107946). Applicant respectfully traverses this rejection as to amended claim 25.

Applicant respectfully submits that Cosby cannot anticipate or render claim 25 obvious, because Cosby fails to teach or suggest "a vibrating element is provided on a surface of the channel in a vicinity of a position in which the channel is connected to the supply portion."

Cosby is directed to a glass cover slip and support assembly used in hybridization methods that provides mixing of the hybridization solution. (Cosby, paragraph [0002]). Cosby fails to teach or suggest that the vibrating element is provided on the wall of the channel or in the channel.

In light of the foregoing, Applicant respectfully submits that Cosby cannot anticipate or render claim 25 obvious, because Cosby fails to teach or suggest each and every claim limitation. Claims 26-29 depend from claim 25 and therefore, cannot be anticipated or rendered obvious for at least the same reasons as claim 25. Withdrawal of this rejection is thus respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103:

Claims 26 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yasuda. Applicant respectfully traverses this rejection.

Claim 29 cannot be rendered obvious over Yasuda for the same reasons discussed above. Claim 26 depends from claim 25 and as such includes all the

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limitations of claim 25, and therefore, cannot be rendered obvious over Yasuda for at least the same reasons discussed above.

In light of the foregoing, Applicant respectfully submits that Yasuda cannot render claims 26 and 29 obvious, because Yasuda fails to teach or suggest each and every claim limitation. Withdrawal of this rejection is thus respectfully requested.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (310) 785-4600 to discuss the steps necessary for placing the application in condition for allowance.

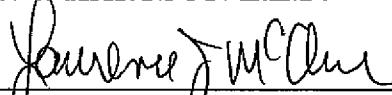
If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

Date: July 8, 2008

By: _____


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